

Amendments to the Drawings:

The attached drawing sheet includes new Figure 26. In Figure 26, steps of modulating and controlling, as recited in claim 15, are depicted. Support for Fig. 26 is found in the current Application at, for example, claim 15. No new matter has been added.

REMARKS/ARGUMENTS

In the Office Action mailed on September 24, 2009, claims 1-8, 13, and 14 are withdrawn from consideration. Additionally, claim 15 is allowed and claims 9-12 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, second paragraph. Furthermore, the specification and the drawings are objected to. In response, the specification and the drawings have been amended. Applicants hereby request reconsideration of the application in view of the amendments and the below-provided remarks.

Objection to the Specification

The Office Action suggests that section headings be added to the specification, according to the guidelines set forth in the MPEP. Applicants note that the suggested section headings are not required and, hence, Applicants respectfully decline to amend the specification to include the indicated section headings.

Additionally, the Office Action reminds Applicants of the proper language and format for the abstract. In response, the abstract has been amended to overcome the objection. Thus, Applicants respectfully request that the objection to the abstract be withdrawn.

Furthermore, the Office Action states that the specification is objected to because of reference to the claims in the specification. In response, the specification has been amended to remove the reference to the claims. Thus, Applicants respectfully request that the objection to the specification be withdrawn.

Objection to the Drawings

The Office Action states that the drawings are objected to under 37 C.F.R. 1.83(a) because the drawings must show every feature of the invention specified in the claims. In particular, the Office Action states that steps of modulating and controlling as recited in claim 15 must be shown or the features canceled from claim 15.

In response, new Figure 26 has been added. Support for Fig. 26 is found in the current Application at, for example, claim 15. No new matter has been added. The specification has been amended accordingly. Figure 26 depicts the steps of modulating and controlling as recited in claim 15. Thus, Applicants hereby request that the objection to the drawings be withdrawn.

Claim Rejection under 35 U.S.C. 112, Second Paragraph

Claim 9-12 are rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claim 9

The Office Action states that the Examiner is unable to identify the structure corresponding to the “*modulating means*” as recited in claim 9. Applicants respectfully point out that at least the current mirror circuits CM depicted in Fig. 10 of the present Application correspond to the “*modulating means for modulating first and second current sources respectively arranged in said first and second differential branches*” as recited in claim 9. For example, Applicants disclose that a differential input signal Δx is adapted to modulate current sources I_0 in both branches of a differential charge pump circuit. (See page 15, lines 26-29). Additionally, Fig. 10 illustrates that modulated currents are output from the current mirror circuits CM in both branches of the differential charge pump circuit.

The Office Action also states that the Examiner is unable to identify the structure corresponding to the “*control means*” as recited in claim 9. Applicants respectfully point out that at least the transistors M1 and M2 of the differential tri-state control circuit TS depicted in Fig. 3 of the present Application correspond to the “*control means for controlling a tail current of said differential input circuit in response to a frequency-locked state of said frequency detector arrangement*” as recited in claim 9. For example, Applicants disclose that phase detection output PD_I and its inverse output are sign-inverted (SI) and supplied to the respective transistors M1 and M2 of the differential tri-

state control circuit TS and that based on the value of the phase detection output PD_I, the tail current I_{bias} of the differential tri-state control circuit TS flows through the sources of transistors M3, M4 or can be dumped or forced to a predetermined current I_{3State} . (See page 13, lines 2-19). Thus, Applicants respectfully assert that the rejection to claim 9 under 35 U.S.C. 112, second paragraph is overcome by the above remarks. As a result, Applicants hereby request that the rejection to claim 9 under 35 U.S.C. 112, second paragraph, be withdrawn.

Claim 10

The Office Action states that claim 10 is rejected because of its dependency on claim 9. As described above, Applicants respectfully assert that the rejection of claim 9 under 35 U.S.C. 112, second paragraph, is overcome by the above remarks. Thus, Applicants hereby request that the rejection of claim 10 under 35 U.S.C. 112, second paragraph, be withdrawn.

Claim 11

The Office Action states that the Examiner is unable to identify the structure corresponding to the “*common mode rejection means*” as recited in claim 11. Applicants respectfully point out that at least the negative feedback circuit or the common-mode rejection circuit C depicted in Fig. 11 of the present Application corresponds to the “*common mode rejection means (C) for comparing a common-mode voltage at the output of said charge pump circuit with a reference voltage (VCM), and for controlling said first and second current sources based on the comparison result*” as recited in claim 11. For example, Applicants disclose that the negative feedback circuit or the common-mode rejection circuit C compares the common-mode voltage at the output with a band gap-referenced voltage V_{CM} and adds/subtracts from both current sources the same current as obtained by the comparison. (See page 16, lines 6-11). Thus, Applicants hereby request that the rejection to claim 11 under 35 U.S.C. 112, second paragraph, be withdrawn.

Claim 12

The Office Action states that the Examiner is unable to identify the structure corresponding to the “switching means” as recited in claim 12. Applicants respectfully point out that at least the transistors M1 and M2 of the differential tri-state control circuit TS depicted in Fig. 3 of the present Application corresponds to the “switching means (M1, M2) for switching said tail current in response to a control signal indicating said frequency-locked state” as recited in claim 12. For example, Applicants disclose that phase detection output PD_I and its inverse output are sign-inverted (SI) and supplied to the respective transistors M1 and M2 of the differential tri-state control circuit TS and that based on the value of the phase detection output PD_I, the tail current I_{bias} of the differential tri-state control circuit TS flows through the sources of transistors M3, M4 or can be dumped or forced to a predetermined current I_{3State} . (See page 13, lines 2-19). Thus, Applicants hereby request that the rejection to claim 12 under 35 U.S.C. 112, second paragraph, be withdrawn.

Allowable Subject Matter

Applicants appreciate the Examiner’s review of and determination that claims 9-12 recite allowable subject matter. In particular, the Office Action states that claims 9-12 would be allowable if rewritten or amended to overcome rejection under 35 U.S.C. 112, second paragraph. Applicants respectfully assert that the rejection to claims 9-12 under 35 U.S.C. 112, second paragraph, is overcome by the above remarks. Thus, Applicants respectfully assert that claims 9-12 are now in condition for allowance.

CONCLUSION

Applicants respectfully request reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-4019** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-4019** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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